☐ Maximum allowable relief valve setting for cargo tanks ≤ 10 psig (69 kPa)

- Liquid and vapor connections — 46 CFR 154.530
- Shutoff valves located as close to tank as possible
  - Capable of local manual operation
  - At least one remotely controlled quick-closing shutoff valve
- Quick-closing valve emergency shutdown — 46 CFR 154.540
  - Closes all valves
  - Two remote locations
  - Fusible elements
  - Automatic shutdown of cargo pumps and compressors — 46 CFR 154.534
- Quick-closing valve requirements — 46 CFR 154.544
  - Fail close
  - Local manual closing
  - Witness test (< 30 seconds)
  - Time to close _____

☐ Maximum allowable relief valve setting for cargo tanks > 10 psig (69 kPa)

Shutoff valves located as close to tank as possible — 46 CFR 154.532

- Capable of local manual operation
- At least one remotely controlled quick-closing shutoff valve
- Witness test (< 30 seconds)
- Time to close _____

If piping is less than 2 inches (50 mm) — 46 CFR 154.532(b)

- Excess flow valve
- Closes automatically — 46 CFR 154.546

OR

One valve that is capable of local manual operations and meets 46 CFR 154.540 and 154.544

☐ Cargo hose — 46 CFR 154.556

- Marking
- Hydrostatic test date _____ — 46 CFR 154.562

Notes: _____

☐ Cargo vent systems

- Pressure relief systems — 46 CFR 154.801

  Tank volume ≤ 20 cubic meters and has at least one pressure relief valve

  Tank volume > 20 cubic meters and had at least two pressure relief valves of same capacity
  - Tank MARVS _____
  - Relief valve setting(s) less than tank MARVS
  - Date last tested _____
  - Properly sealed
  - No stop valves unless interlocked
- Vacuum protection (method for testing either of the following) — 46 CFR 154.804
  - 2 independent pressure switches
    - 1 to operate audible and visual alarms set at 80% in cargo control room and in wheelhouse
    - 1 to automatically shut off liquid or vapor suction
  - Vacuum relief valve
    - Adequate gas flow capacity
    - Set to open
    - Admits inert gas, vapor, or air
- Vent masts — 46 CFR 154.805
  - Discharge vertically upward
  - Proper weather hood
  - Proper screen (last serviced / replaced____)
  - Height above weather deck_____ (> B/3 or 6 meters / 19.7 feet)
  - Height above working level _____ (6 meters /19.7 feet)
    - Adequate distance from air takes to accommodation and other gas-free spaces > 10 meters

Notes: _____

☐ Toxic vapor detectors — 46 CFR 153.526

- Vapor detector
  - 1 fixed
  - 1 portable
  - Witness calibration

☐ General safety

- Entry into spaces — 46 CFR 153.934
- Opening of tanks — 46 CFR 153.935
- Storage of cargo samples — 46 CFR 153.935(a)

☐ Vapor Control System (VCS) — 46 CFR 156.120(aa) 46 CFR 39.10-13(d)

Vessel in not using a VCS

Vessel is using a VCS

- LOC endorsed for VCS use
- Complies with 33 CFR 156.120(aa) and 156.170(g)

☐ Cargo transfer procedures

- Signals — 46 CFR 153.953
  - Red flag
  - Red light
- Warning signs — 46 CFR 153.955
  - Minimum of two
  - Legends
    - "Warning"
    - "Dangerous Cargo"
    - "No Visitors"
    - "No Smoking"
    - "No Open Lights"
  - Lettering — 46 CFR 153.957
- Person-in-charge
  - Valid document — 33 CFR 155.700
  - Designated by master — 33 CFR 155.710
  - Speaks English or has interpreter — 46 CFR 153.959
- Approval to begin transfer — 46 CFR 153.972
- Cargo hose
  - Marked in accordance with 46 CFR 153.940
  - Working pressure
  - Date of last pressure test _____ < 1 year
  - Temperature range _____

Notes: _____

☐ Firefighting

- Exterior water spray — 46 CFR 154.1105
  - Areas protected — 46 CFR 154.1110
  - Discharge — 46 CFR 154.1115
  - Nozzles — 46 CFR 154.1120
  - Pipes, fittings, and valves — 46 CFR 154.1125
  - Pumps — 46 CFR 154.1135
    - Witnessed simultaneous operation of deck spray and firemain systems
- Dry chemical — 46 CFR 154.1145

  Cargo capacity < 1,000 cubic meters (35,300 cubic feet)—at least 1 self-contained unit

  Cargo capacity ≥ 1,000 cubic meters (35,300 cubic feet)—at least 2 self-contained units
  - Date last serviced _____
  - Distribution — 46 CFR 154.1150
    - Cargo areas and pipelines
      - At least 2 hand hose lines OR
      - At least 1 hand hose line and 1 monitor
    - After end of cargo areas
      - At least 1 storage unit AND
      - Hand hose line or monitor
    - Each cargo manifold
      - At least 1 monitor
  - Controls — 46 CFR 154.1165
    - Local for hand hose line and monitor
    - Remote for cargo manifold monitor

☐ Cargo area mechanical ventilation — 46 CFR 154.1200

- Fixed exhaust systems where required
  - Exhaust system ducts where required — 46 CFR 154.1205
  - Location of exhaust ducts
- Fixed supply systems where required
- Operational controls outside the ventilated space
- Electric ventilation motor location
- Ventilation impeller and housing materials
- Protective metal screen

Notes: _____

☐ Gauging system

- Type — 46 CFR 153.400

  Open

  Closed — 46 CFR 153.404
  - – Vapor return connection
  - – High level alarm
  - – Means for sampling

  Restricted — 46 CFR 153.406
  - – Vapor-tight cover
  - – Lock open P/V valves or valved bypasses
  - – Sounding tube requirements — 46 CFR 153.407

☐ Tank overflow control — 46 CFR 153.408

- High level alarm — 46 CFR 153.409
  - – Set point (< 97%) _____%
  - – Witnessed operation test
  - – Visual / audible alarms at cargo control and open deck
  - – Marked “High Level Alarm”

  Cargo overflow alarm — 46 CFR 153.408
  - Independent of high level alarm
  - Operates on loss of power
  - Set point (< 100%)
  - Witnessed test at tank
  - Visual / audible alarms in containment area and cargo loading control
  - Marked “Tank Overflow Alarm”

  Automatic shutdown system — 46 CFR 153.408
  - Independent of high level alarm
  - Operates on loss of power
  - Set point (< 100%) _____%
  - Witnessed test at tank

Notes: _____

☐ Gas detection systems

- Gas detection for “I” OR “I” and “T” cargoes — 46 CFR 154.1345, 46 CFR 154.1350
  - – Fixed flammable gas detection system
    - Sampling points where required
    - Measures gas concentrations at least 0% to 200% of alarm concentrations
    - Date last calibrated _____
    - Span gas used _____
    - Concentration _____
    - Audible and visual alarms that are actuated— 46 CFR 154.1365
      - – At 30% or less LEL
      - – For power failure
      - – For loss of gas sampling flow
    - Sampling points monitored every 30 minutes or less
    - Operable flow meter
    - Witness operation and operational tests
  - – 2 portable detectors that each measure 0% to 100% LEL
- Gas detection for “T” OR “I” and “T” cargoes
  - – 2 portable detectors that each show TLV
  - – Fixed sampling tubes in each hold and interbarrier space — 46 CFR 154.1360
- Oxygen analyzer

Notes: _____

☐ Valves and handling equipment

- Manual stop — 46 CFR 153.283
- Pump manifolds — 46 CFR 153.285
- Emergency shutdown stations tested — 46 CFR 153.296
  - Minimum of two
  - Location
  - Single actuator
  - Properly marked
- Actuator at cargo control — 46 CFR 153.297

☐ Cargo handling space ventilation

- Forced exhaust ventilation — 46 CFR 153.310
- System standards — 46 CFR 153.312
  - Discharge 10 meters from accommodation / service spaces
  - Operable from outside space
  - Air exchange rate 30 times per hour
  - Exhaust above and below deck places
- Special ventilation rate — 46 CFR 153.316
  - Rate for certain cargoes (45 times per hour and no less than 4 meters above deck)

☐ Pumprooms — MSM Vol. I Ch.10 Appendix A MSM Vol. II Ch. 5.I

NOTE: *If pumproom is not gas-free, issue requirement to make it available at next U.S. port.*

- Marine Chemist Certificate — 46 CFR 153.330
  - Chemist No. _____
  - Certificate No._____
  - Date issued _____
- Ventilation — SOLAS 74/78 II-2/59.3
- Hoisting arrangement — 46 CFR 153.332
- Pump discharge pressure gauge — 46 CFR 153.333
- Bilge pumping system — 46 CFR 153.334
  - Witness operation and alarm
- Fire extinguishing system — SOLAS 74/78 II-2/63
- Electrical installation
- Special requirements — 46 CFR 153.336

Notes: _____

Section 5: Cargo Operations for Natural Gas (LNG) Carriers

Vapor Control Systems:

☐ Person-in-charge of transfer system completed training program — 46 CFR 39.10-11

☐ VCS certification — 46 CFR 39.10-13

- Marine Safety Center Letter No._____
  OR
- Approval from recognized class society addressing the following items:
  - Vessel name
  - Class of vessel or official number
  - Call sign
  - Flag
  - Reviewed by proper authority to meet U.S. standard — 46 CFR Part 39
  - Inert gas manual amended — 46 CFR 32.53-85(b)
  - Proper allowable transfer rate (cubic meters / hour)
  - Applicable cargo tanks
  - Maximum density of cargo vapor
  - List of cargoes (proper cargo names)
  - Oil transfer procedures amended — 33 CFR 155.750(d)

VCS Design and Equipment:

NOTE: *Requirements for VCS design and equipment are detailed in 46 CFR 39.20-1.*

☐ Piping permanently installed

- Interim for chemical tankers

☐ Connection located at manifold

- N/A if chemical tankship venting system is not common

☐ Incompatible cargo vapors can be isolated

☐ Connections located at cargo tanks

Notes: _____

☐ Steering gear machinery — SOLAS 74/78 II-1/29

- Linkages
- Hydraulic leaks
- Ram guides
- Lubrication

◇ Operationally test main and auxiliary steering gear — SOLAS 74/78 II-1/29.15 through 29.20

- 28-second operation
- Systems operate independently
- Unusual vibrations / leaks
- Ram hunting
- Limit switches
- Communications with bridge
- Steering gear instructions (block diagram)

◇ Main ship service generators — SOLAS 74/78 II-1/41
NOTE: *Two independent sources of power require.*

- F/O piping
- Cooling lines
- Controls

◇ Emergency generator room — SOLAS 74/78 II-1/43

- Test operation of prime mover
- Personnel safety
- Ventilation adequate
- Electrical switchboard
  - Grounds

◇ Bilge pumps — SOLAS 74/78 II-1/21

- Two required

Notes: _____

Cargo Gauging System:

☐ Closed gauging system — 46 CFR 39.20-3

- Independent of overfill alarm system
- Full range of measurement in each cargo tank
- Liquid level indicated where cargo transfer is controlled — 46 CFR 151.15-10
- Unit installed on cargo tanks during entire transfer if closed gauging system is portable

Liquid Overfill Protection:

NOTE: *Requirements for liquid overfill protection are detailed in 46 CFR 39.20-7.*

☐ Overfill system

- Provides an alarm upon loss of power or electrical circuitry failure
  - Audible and visual alarm on deck and where cargo transfer is controlled
  - Capable of being tested at the tank or have a electronic self-testing feature
- Properly marked on deck
- Operationally tested and demonstrated

☐ High-level alarm

- Independent of overfill system
- Provides an alarm upon loss of power or electrical circuitry failure
  - Audible and visual alarm on deck and where cargo transfer is controlled
  - Capable of being tested at the tank or have a electronic self-testing feature
- Alarm sounds not higher than overfill alarm and at no lower than 95% of tank capacity
- Operationally tested and demonstrated

☐ Spill valves — 46 CFR 39.20-9(c)

☐ Rupture disks — 46 CFR 39.20-9(d)

Notes: _____

☐ International shore connection — SOLAS 74/78 II-2/19

☐ Means of escape from accommodation, machinery, and other spaces — SOLAS 74/78 II-2/45

- Two required (some exceptions)
- Dead end corridors

☐ Portable fire extinguishers (spot-check)

- Good condition / available for immediate use — SOLAS 74/78 II-2/21
- Located on stations
- Serviced at periodic intervals — SOLAS 74/78 II-2/6.5

◇ Test operation of fire main system

- Required number of fire pumps — SOLAS 74/78 II-2/3
- Location of pumps — SOLAS 74/78 II-2/4
- Pumps, hydrants, piping, hoses, and nozzles in good condition and available for immediate use — SOLAS 74/78 II-2/21

◇ Structural fire protection (spot-check) — SOLAS 74/78 II-2/42

- Bulkheads
- Insulation
- Ventilation
- Penetrations

◇ Fixed fire extinguishing systems: cargo, machinery, and other spaces — SOLAS 74/78 II-2/21

- Tanks, cylinders, piping, controls, alarms, and release mechanisms in good condition and available for immediate use

Type of system: (circle appropriate type)			
Low Pressure CO_2	High Pressure CO_2	Halon	Foam

Pollution Prevention: (spot-check at reexaminations)

☐ Pollution placard posted — 33 CFR 155.450

☐ MARPOL V placard posted — 33 CFR 151.59, MARPOL Ax. V/9

Notes: _____

☐ Low pressure alarm

- Audible and visual alarms where cargo transfer is controlled
- Activates no less than 0.144 for an inerted tankship or no less than the lowest P/V valve vacuum setting

Operations:

NOTE: *Requirements for operations are detailed in 46 CFR 39.30-1.*

☐ Pressure drops

Determined through VCS from most remote cargo tank to the connection

Determined for all cargoes at maximum transfer rates and at lessor transfer rates

Determined through vapor hoses, if carried

☐ Cargo tanks properly filled

- Less than 98.5% of tank capacity
  OR
- Less than overfill setting

☐ High-level and overfill alarms been tested within 24 hours prior to loading cargo

☐ Operationally test and demonstrate remote operated valves

☐ Operationally test and demonstrate emergency shutdowns

Notes: _____

☐ Davit system — SOLAS 74/78 III/19.2, SOLAS 74/78 III/48

- Structure and foundation
- Roller tracks
- Lubrication (evidence of use)
- Falls; end for end / renew (2.5 / 5 years)
- No obstructions to lowering

☐ Embarkation area — SOLAS 74/78 III/11.7

- No obstructions
- Embarkation ladder
- Launching instructions — SOLAS 74/78 III/9
- Emergency lighting

☐ Liferafts — SOLAS 74/78 III/19

- Required number — SOLAS 74/78 III/26
- Stowage — SOLAS 74/78 III/29
- Float-free arrangement
  - Hydrostatic release / weak link
- Annual servicing (hydrostatic release and inflatable liferaft) — SOLAS 74/78 III/19.8.1, SOLAS 74/78 III/19.9.1
  - Maximum 17 months
- Launching instructions posted — SOLAS 74/78 III/9
- Bow / stern station
  - Lashed down on deck or in marked location
  - Lifejackets available

☐ Lifebuoys (spot-check)

- Condition — SOLAS 74/78 III/19.2
- Bridge location — SOLAS 74/78 III/7.1
  - Quick release system
  - Smoke and light float
- Deck location
  - 50% with waterlights
- Retro-reflective tape — SOLAS 74/78 III/30.2.7

Notes: _____

☐ Fuel lines — 46 CFR 154.706

- Master valve

Double-walled fuel line

- Annular space inerted
- Pressure in annular space greater than gas pressure
- Visual and audible alarms in machinery space to indicate loss of inert gas pressure
- Termination — 46 CFR 154.707(a)

Single-walled fuel line

- Installed in mechanically exhaust-ventilated duct or pipe
- Ventilation (30 changes of air / hour) — 46 CFR 154.1205
- Pressure in space between inner and outer pipe < atmospheric pressure
- Continuous gas detection
- Termination hood or casing — 46 CFR 154.707(a)

☐ Valves — 46 CFR 154.708

- 2 fail-closed valves
- 1 fail-open valve for venting
- Automatic operation for—
  - Loss of boiler forced draft
  - Flame failure
  - Abnormal fuel supply pressure
- Master gas fuel valve outside machinery space
  - Operable from machinery space and at valve
  - Automatic closure for—
    - Gas leak
    - Loss of ventilation
    - Loss of inert gas pressure

☐ Gas detection equipment — 46 CFR 154.709, 46 CFR 154.1350

- Audible and visual alarm in machinery control station and wheelhouse
- Closes master gas fuel valve

Notes: _____

☐ Safe access to tanker bows — SOLAS 74/78 II-1/3-3
(vessels built prior to 1 JUL 98 not required to comply until 1 JUL 2001)

Structural Integrity

NOTE: *Request records of Outstanding Conditions of Class. (Form or format may vary depending on classification society.) Conditions of Class may identify structural defects, wastage, etc. Conditions may also identify ships overdue for drydocking, repair or other required service.*

☐ Hull structure — ICLL 66 Reg. 1

- Frame pulling away
- Fractures in corners
- Holes in main decks
- Leaks / patching on ballast tanks
- Bulkheads / decks warped
- Excessive wastage

☐ Side shell, accessible structural members, decks, and superstructure — ICLL 66 Reg. 1

- Fractures, corrosion, wastage, pitting or damage to the extent that it may impair ship's seaworthiness
- Excessive doublers, postage stamp inserts, cement boxes or soft patches
- Welding burn marks or other evidence of recent repair work
- Load line marked in accordance with certificates — ICLL 66 Regs. 4 - 9
  - Hailing port
  - Name
- Railings

☐ Watertight/weathertight openings

- Watertight doors, gaskets, dogs — ICLL 66 Reg. 12
- Other openings (means of securing) — ICLL 66 Regs. 13 - 18
- Vents, air pipes and closing appliances — ICLL 66 Regs. 19 & 20

Notes: _____

◇ Abandon Ship Drill:

General alarms / signals	Familiarity with duties	Boat operation
Muster lists	Provide equipment	Egress procedures
Muster of crew	Familiarity with equipment	Davit-launched liferaft drill
Crew response	Lower lifeboat	Communication w/ bridge
Language understood by crew	Brake operation	Lighting
Lifejackets	Engine start	

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.h)

Location: _____ Time to Water: _____

Notes: _____

☐ Indicators — 33 CFR 164.35

- Illuminated rudder angle indicator
- Centerline RPM indicator
- Propeller pitch (CPP systems)
- Speed and distance indicators — 33 CFR 164.40
- Lateral thrusters

☐ Communications — SOLAS 74/78 IV/6.3, 33 CFR 26.03

- VHF radio

☐ Steering gear instructions — 33 CFR 164.35

- Instructions
- Emergency instructions
- Block diagram

☐ Maneuvering facts sheet with warning statement — 33 CFR 164.35

☐ Radiotelephone (VHF-FM) — SOLAS 74/78 IV/7, 33 CFR 26.03, 33 CFR 26.04

☐ EPIRB (406 MHz) — SOLAS 74/78 IV/7.1.6

- Float-free amount
- Battery date current
- Hydrostatic release

☐ GMDSS — SOLAS 74/78 IV/8, SOLAS 74/78 IV/9, SOLAS 74/78 IV/10, SOLAS 74/78 IV/11

- Additional radio equipment for area of operation

◇ Operationally test bridge steering — SOLAS 74/78 II/1-29

- Test power/control pumps independently
- Test follow-up and non-follow-up controls
- Rudder angle indicator accurate
- Activate loss of power alarm

◇ GMDSS lifeboat radios (VHF) — SOLAS 74/78 III/6.2

- 3 if over 500 GT
- Operable condition

Notes: _____

○ Company's training program conducted in accordance with STCW — STCW I/14

NOTE: *Documented procedures established to ensure new personnel and personnel transferred to new assignments are given proper familiarization with their duties.*

- Proper documentation
- Training conducted before crew is assigned shipboard duties
- Essential instructions are documented and provided before sailing

○ Crew familiar with SMS issues

- Ship's officers
  - Documented procedures
  - Preventative procedures for essential equipment
  - Reporting requirements for non-conformities and able to identify typical scenarios that may result in a documented non-conformity
- Master and chief engineer familiar with internal audit procedures (e.g., know how many audits required per year and have participated in at least one) in addition to requirement's for ship's officers

○ Documented maintenance system

- Documented in writing and computerized versions
- Readily available and in language understood by those who use them
- Procedures are followed
- Records maintained

○ Vessel-specific procedures are documented in writing and address the following areas:

NOTE: *Not mandatory that they follow the exact format listed below.*

- Preventative maintenance
- Navigation
- Bunkering operations
- Emergency preparedness
- Pollution prevention
- Technical procedures
- Communications

Notes: _____

- ☐ Approved Procedures & Arrangement Manual — MARPOL Ax. II
- ☐ Cargo record book — MARPOL Ax. II/19
  - Proper format
  - Properly completed
- ☐ Cargo information — 46 CFR 153.907
  - Cargo manifest
  - Procedures for spills / leaks
- ☐ Cargo location plan — 46 CFR 153.907
  - Cargo compatibility — 46 CFR Part 150
- ☐ Cargo piping plan — 46 CFR 153.910
- ☐ Shipping document — 46 CFR 153.907
- ☐ Waiver letters carried — 46 CFR 153.10
- ☐ Certificate of inhibition or stabilization — 46 CFR 153.912
  - Name and concentration _____
  - Date added to cargo _____
  - Length of time effective _____
  - Temperature limitations _____
  - Certificate states action to be taken if voyage exceeds useful life of the inhibitor / stabilizer
- ☐ Current copy of 46 CFR Parts 35, 150, and 153 aboard — 46 CFR 153.905

Notes: _____

- ○ Lights, shapes, and sound signals — 72 COLREGS
  - Navigation lights
  - Sound signals
  - Distress signals
- ○ Radio log — SOLAS 74/78 IV/17
- ○ Radio operation — SOLAS 74/78 IV/7
  - Transmit on 2182 MHz and Ch. 6, 13, 16, 70
- ○ INMARSAT communications — SOLAS 74/78 IV/7.1.5

Cargo Operations:

- ○ Human Factors: determine if personnel are familiar with the following items: — STCW Table A-II/III
  - Special requirements (e.g., loading, segregation, firefighting equipment, etc.) for particular cargoes
  - Dangers posed by the cargo
  - Measures to be taken for cargo emergencies

Lifesaving Equipment:

- ○ Lifeboats/liferafts/rescue boats
  - Ensure effective operation of winches, davits, falls, sheaves, etc. (Lower at least one lifeboat to the water.) — SOLAS 74/78 III/19
  - Test lifeboat and rescue boat flemming gear and/or engines
  - Verify presence/condition of lifeboat equipment — SOLAS 74/78 III/41
  - Retro-reflective tape
  - Lighting — SOLAS 74/78 III/11.4

Notes: _____

Manning:

- ☐ Officers' licenses current — STCW 95 I/2, STCW 95 I/10, STCW 95 VI/1, STCW 95 VI/2
- ☐ Rest periods — STCW 95 VIII/1
  - Review watch schedules

Logs and Manuals:

- ☐ Lifesaving equipment maintenance record — SOLAS 74/78 III/19
  - Periodic checks as required
  - Visual inspection of survival craft / rescue boat and launching appliances
  - Operation of lifeboat / rescue boat engines
  - Lifesaving appliances, including lifeboat equipment examined
- ☐ Emergency training and drills — SOLAS 74/78 III/18
  - Onboard training in use of lifesaving equipment (all crew members)
  - SOLAS training manual
  - Logbook records — SOLAS 74/78 III/18.5
  - Weekly and lifeboat drills — SOLAS 74/78 III/25
- ☐ Bridge log — STCW 95 I/14
  - Pre-arrival tests conducted — 33 CFR 164.25
  - Casualties (navigation equipment and steering gear failures reported) — 33 CFR 164.53
  - Steering gear drills
  - Emergency steering drills
- ☐ Exemptions to SOLAS certificates — SOLAS 74/78 I/4

Notes: _____

- ○ Paint lockers and flammable liquid lockers protected by an appropriate fire extinguishing arrangement — SOLAS 74/78 II-2/18.7
- ○ Fixed fire extinguishing arrangements in cargo spaces for vessels ≥ 2000 GT — SOLAS 74/78 II-2/53.1
- ○ Special arrangements in machinery spaces — SOLAS 74/78 II-2/11
  - Machinery space ventilating fans can be shut down from outside spaces
  - All openings capable of being closed from outside machinery spaces
  - Machinery driving forced / induced draft fans, oil fuel transfer pumps, and other fuel pumps fitted with remote shutdowns located outside space concerned
- ○ Firemen's outfits (spot-check) — SOLAS 74/78 II-2/17.3
  - Two lockers
  - Four outfits
  - Protective clothing
  - Helmet, boots, and gloves
  - Lamp
  - Axe
  - Breathing apparatus and lifeline

Pollution Prevention:

- ○ Equipment
  - Test automatic stopping device required for discharge — MARPOL Ax. I/10
  - Segregation of oil fuel and water ballast systems — MARPOL Ax. I/14
  - Oily residue tank (discharge arrangements, homogenizers, incinerators, etc.) — MARPOL Ax. I/17
  - Witness operational test of emergency shutdown — 33 CFR 155.780

Notes: _____

Section 2: Certificates and Documents

International Certificates:

Name of Certificate	Issuing Agency	ID #	Port Issued	Issue Date	Exp. Date	Endors. Date
Certificate of Documentation No Change	USCG					
Classification Document No Change						
Certificate of Financial Responsibility (COFR) No Change	USCG					
Safety Construction (SLC) No Change						
Safety Equipment (SLE) No Change						
Safety Radio (SLT) No Change						
International Load Line (ILL) No Change						

- Steering gear alarms — SOLAS 74/78 II-1/29
  - Low hydraulic oil
  - Loss of power
  - Loss of phrase
  - Overload
- Human Factors: determine if personnel are familiar with the operation of the following items — STCW Table A-III
  - Emergency generator:
    - Actions necessary before engine can be started
    - Different methods by which generator may be started
  - Stand-by generator engine:
    - Methods to start engine automatically or manually
    - Blackout procedures
    - Load-sharing system
  - Steering gear:
    - Action needed to bring main and auxiliary into operation
    - Changing steering from automatic to manual and vice versa
  - Bilge pumps:
    - Starting procedures for main and emergency bilge pump
    - Appropriate valves to operate
  - Fire pumps:
    - Starting procedures for main and emergency fire pumps
    - Appropriate valves to operate

Notes: _____

Involved Parties & General Information:

Vessel's Representatives
_____
_____
Phone Numbers

Owner—Listed on DOC or COFR
No Change

Operator
No Change

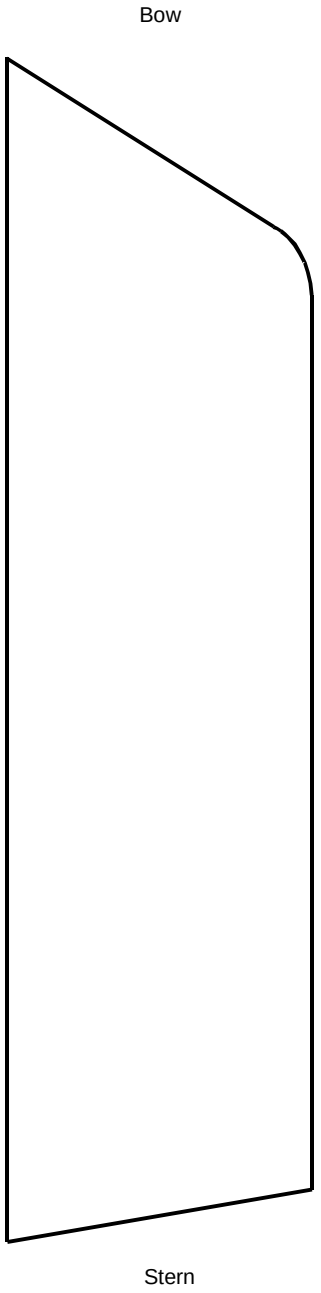
○ Proper operation of IGS audible and visual alarms

- High O_2 content of gas in IGS main
  - Activated at 8% concentration
- Low gas pressure in IGS main downstream of all non-return devices
  - Activated at 100mm (4 inches) water
- High gas pressure in IGS main downstream of all non-return devices
  - Blowers automatically shut down
  - Gas-regulating valves close
- Low / high water level or low flow to deck seal
  - Blowers automatically shut down
- Blowers discharge high temperature
  - Alarms activated at 150°F (65.6°C) or lower
  - Blowers automatically shut down
  - Gas-regulating valves close
- Failure of IGS blowers
  - Gas-regulating valves close
- Low water pressure or flow to flue gas scrubber
  - Blowers automatically shut down
  - Gas-regulating valves close
- High water level in flue gas scrubber
  - Blowers automatically shut down
  - Gas-regulating valves close
- Failure of power supply to automatic control system for gas-regulation valve and indicating devices for IG supply
- IG generator
  - Insufficient fuel supply
  - Failure of power supply to generator or control system for generator

Notes: _____

Section 7: Expanded Examination Items

Section 8: Appendices



Pre-inspection Items

- Review vessel computer (survey status) reports from the ACP class society.
- Review reports pertaining to conditions of class or statutory deficiencies
- Obtain copies of forms or certificates to be issued.

Post-inspection Items

- Issue forms/certificates to vessel.
- Update MSIS with international certificate data.
  - VFOD
  - VFLD
  - MIAR
  - MSDS
  - MIDR
- Initiate Report of Violation (ROV) if necessary

Recommended ACP Vessel Deficiency Procedures:

Step	Action
1	Identify deficiency.
2	Inform vessel representative.
3	Record on the *Deficiency Summary Worksheet* (next page).
4	If deficiency is corrected prior to end of exam, go to Step 7.
5	If deficiency is unable to be corrected prior to end of exam, follow guidance in the tables below.

TABLE 1: Minor deficiency discovered by Coast Guard marine inspector*

Step	Action
1	Notify ACP class surveyor-in-charge.
2	If ACP class surveyor issues an OSR, go to Step 7.
3	If ACP class surveyor is not available, issue CG-835 to vessel with copy sent to ACP class surveyor-in-charge. Go to Step 6.

TABLE 2: Major deficiency that poses a direct and immediate threat to vessel's crew, safety of navigation, or marine environment*

Step	Action
1	Notify ACP class surveyor-in-charge of deficiency.
2	Ascertain proposed corrective action.
3	Detain vessel if so determined by OCMI under SOLAS I/19 or MARPOL Article 5.

* ***NOTE:*** *Deficiencies shall indicate the item must be completed to the satisfaction of either the OCMI or ACP class society. The OCMI may deny or revoke the COI for noncompliance with the terms and/or conditions of the deficiencies.*

6	Enter CG-835 data in MIDR.
7	Enter deficiency data in MSDS.
8	Initiate Report of Violation (ROV) if necessary.

Total Time Spent Per Activity:

Regular Personnel (Active Duty)			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Reserve Personnel			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Auxiliary Resources	
TOTAL BOAT HOURS	TOTAL AIRCRAFT HOURS

Conversions:

Distance and Energy				
Kilowatts (kW)	X	1.341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)

Liquid (***NOTE:*** *Values are approximate.)*

Liquid	bbl/LT	m^3/t	bbl/m^3	bbl/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heavy Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05

Weight

1 Long Ton	=	2240 lbs	1 Metric Ton	=	2204 lbs
1 Short Ton	=	2000 lbs	1 Cubic Foot	=	7.48 gal
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m^3	1 psi	=	.06895 Bar = 2.3106 ft of water

Temperature: Fahrenheit = Celsius (°F = 9/5 °C + 32 and °C = 5/9 (°F – 32))

0	=	-17.8	80	=	26.7	200	=	93.3
32	=	0	90	=	32.2	250	=	121.1
40	=	4.4	100	=	37.8	300	=	148.9
50	=	10.0	110	=	43.3	400	=	204.4
60	=	15.6	120	=	48.9	500	=	260
70	=	21.1	150	=	65.6	1000	=	537.8

Pressure: Bars = Pounds per square inch

1 Bar	=	14.5 psi	5 Bars	=	72.5 psi	9 Bars	=	130.5 psi
2 bars	=	29.0 psi	6 Bars	=	87.0 psi	10 Bars	=	145.0 psi
3 Bars	=	43.5 psi	7 Bars	=	101.5 psi			
4 Bars	=	58.0 psi	8 Bars	=	116.0 psi			